DOCUMENT RESUME

ED 478 753 SO 035 073

AUTHOR	Cockbill, Thomas
TITLE	Cultural Psychology and the Learning of History: The Problem of Ecological Validity.
PUB DATE	2003-04-00
NOTE	34p.; Paper presented at the Annual Meeting of the American Educational Research Association (84th, Chicago, IL, April 21-25, 2003).
PUB TYPE	Reports - Evaluative (142) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS
DESCRIPTORS	Accountability; Classroom Techniques; Elementary Secondary Education; *History Instruction; *Learning Processes
IDENTIFIERS	Conceptual Analysis; *Cultural Psychology; *Ecological Validity

ABSTRACT

This paper is a conceptual analysis that examines some of the main features of cultural psychology and its attendant methodological requirement of ecological validity as they apply to student learning of history. The paper abstracts an ideal type of ecological validity from several versions of the requirement in the literature and applies it to three recent prescriptions for the learning of history. It makes an effort to evaluate the successes of those applications from the standpoint of ecological validity, with particular reference to standardized tests such as the National Assessment of Educational Progress (NAEP), pedagogical approaches to history, and a number of theories about how students best learn history. The paper concludes with tentative implications for the theme of accountability in educational research based on conclusions reached about the worth of ecological validity as a methodological requirement. (Contains 33 references.) (Author/BT)

Reproductions supplied by EDRS are the best that can be made
from the original document.

Cultural Psychology and the Learning of History: The Problem of Ecological Validity.

Thomas Cockbill

ED 478 753

SO 035 073

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

T. Cockbill

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

BEST COPY AVAILABLE

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent

Cultural Psychology and the Learning of History: The Problem of Ecological Validity*

Thomas Cockbill
New York University

This paper is a conceptual analysis that examines some of the main features of cultural psychology and its attendant methodological requirement of ecological validity as they apply to student learning of history. An ideal type of ecological validity is abstracted from several versions of the requirement in the literature and applied to three recent prescriptions for the learning of history. An effort is then made to evaluate the successes of those applications from the standpoint of ecological validity, especially with reference to standardized tests like NAEP, pedagogical approaches to history, and a number of theories about how students best learn history. Finally, some tentative implications for the theme of accountability in educational research are drawn from the conclusions reached about the worth of ecological validity as a methodological requirement.

"The search for method," Vygotsky said, "becomes one of the most important problems of the entire enterprise of understanding the uniquely human forms of psychological activity." (Vygotsky, 1978, p. 65) A rehearsal of Vygotsky's conception of the method appropriate to psychological study is a good starting point for the explanation of current cultural psychology for several reasons. As a matter of intellectual history, Vygotsky stands squarely in the line of cultural, or socio-cultural, psychologists beginning with William Wundt, whom today's cultural psychologists identify as spiritual ancestors of their discipline. (Cole, 1995) Many of Vygotsky's ideas, moreover, such as

*I thank Professor Cynthia McCallister of New York University for introducing me to a wide range of literature on cultural psychology and for giving me valuable comments on an earlier version of this paper. Professor Margot Ely of New York University also made helpful suggestions on that draft.

his strictures against the limits of straightforward stimulus-response experiments and his emphasis on the need to focus on experimental process rather than product, have been taken over by cultural psychologists. On the other hand, some aspects of Vygotsky's methodological approach, such as his and his students'conducting of structured, controlled experiments; his search for the essence of psychological processes; and his ethnocentric studies of psychology in non-European cultures, represent tendencies attributed to mainstream and cross-cultural psychology that have been sharply criticized by cultural psychologists . Those criticisms serve as a convenient point of entry into the main tenets of cultural psychology and, as a consequence, into some versions of ecological validity. An abstraction from those versions in the form of a methodological principle will be applied to several recent prescriptions for history learning. The success or failure of those applications, in turn, will allow me to draw conclusions about the contributions of cultural psychology and its notion of ecological validity to the theme of accountability in educational research. I begin, therefore, with a brief survey of Vygotsky's conception of method and the direct or implied responses to it of cultural psychologists.

Vygotsky's Method and Its Relation to Cultural Psychology

The method Vygotsky advocated for the investigation and analysis of psychological phenomena was elaborated from three main sources: psychological experiments, forerunners in the field of psychology, and Marxian theory. In addition, Vygotsky relied on a view of language as signs that mediated the relationship between subject and object. (Wertsch, 1985) These sources were intertwined in his theoretical writings in a way that makes an analytical treatment of their relative contributions to his

overall theory artificial, so I will proceed instead by summarizing his main conclusions. Above all, Vygotsky rejected the stimulus-response framework he associated with what he called "the objective psychology" of Watson and others, primarily because in dealing with sensory experience and simple reactions Watson and his colleagues failed to get beyond elementary mental functions like perception to higher ones like abstraction.

It must be noted that Vygotsky did not entirely reject the stimulus-response approach. Rather, he modified it, arguing that connections between stimuli and responses could only be meaningful to psychological investigators if subjects understood the significance of those connections *from their point of view*. Once understood by the subjects, especially children, experiments involving stimulus-response relations led in Vygotsky's view to the creative organization of external stimuli independently and a grasping by the children of the structure of the process. So the children at this point had according to Vygotsky learned the laws by which external signs are governed. Another modification Vygotsky made to the simple stimulus-response model was to insist on a method of double stimulation, whereby neutral stimuli were presented to the child, enabling her to incorporate the neutral stimuli as signs. (Vygotsky, 1978) At some future point, the child grasped the process by which signs could be used to refer to categories of objects and had arrived at the point of abstraction, or the recognition of linguistic signs as mediating tools in learning. (Wertsch, 2000) All of these processes in Vygotsky's view contributed to the development of higher psychological functions. Less noted is the contribution of this aspect of Vygotsky's method to the theme of student intentionality.

To the extent that those processes were based in a modified stimulus-response environment, they were not entirely incompatible with the views of contemporary

cultural psychologists, one of whom has argued that "in the language of cultural psychology. . .there are no unreconstructed or unmediated stimulus events." (Shweder, 1990, p. 24) There is a reciprocal relationship between intentional persons, who form their own descriptions and mental representations of things, and intentional worlds, the realities persons constitute and embody out of the descriptions and mental representations they form. (Shweder, 1990) If "nature" be substituted for the cultural world, Vygotsky's belief that a dialectical relationship of sorts existed between nature and individuals and formed the basis of his approach to experimentation and analysis, (Vygotsky, 1978) this relationship may have been analogous to the reciprocal relationship between culture and mental life in cultural psychology. Vygotsky's notion of analysis was a dynamic and developmental one, moreover, that distinguishes his method from what has been described as the "linear" analysis of mainstream psychology today. (Shweder, 1990) Nor did Vygotsky neglect references to culture as well as nature, maintaining that the "internalization of cultural forms of behavior" involved "the reconstruction of psychological activity on the basis of sign operations." (Vygotsky, 1978, p. 57) Of course, much in Vygotsky's formulation of the relationship between culture and psychological activity would have to be restated, if not reconceived, to satisfy cultural psychology's conditions for a reciprocal relationship between culture understood as an intentional world and individuals' mental representations.

Where cultural psychologists might criticize Vygotsky is in his sharing with other psychologists of his time the further belief that inner psychological processes needed to be objectified. (Vygotsky, 1978) If Vygotsky meant by this that inner psychological processes should be regarded as fixed, universal, and abstract, then they seem to at least

partially fulfill the description of a "central processing mechanism," which one cultural psychologist refers to as a "Platonic" view of the psyche. (Shweder, 1990) Vygotsky's theory would on this point be subject to criticisms cultural psychologists aim at mainstream psychology. Even if his conception of inner psychological processes did not amount to a "central processing mechanism," Vygotsky would still be vulnerable to cultural psychology's rejection of the distinction between subject and object, (Shweder, 1990) unless that distinction in Vygotsky be part of the dialectical relationship he envisioned between individual psychology and culture or nature. And to the extent that Vygotsky based that dialectical relationship in a historical and developmental process, his theory would escape cultural psychology's dismissal of mainstream psychology's quest for abstractions and universal laws. (Shweder, 1990)

Vygotsky's emphasis on psychological processes forms a second component of his method. "Any psychological process," he said, "whether the development of thought or voluntary behavior, is a process undergoing changes right before one's eyes." (Vygotsky, 1978, p. 61) If thought in this statement is equated with cultural psychology's mental representations, and to a lesser extent voluntary behavior with its intentional behavior, then Vygotsky's view of psychological processes fits fairly well with the idea of a reciprocal relationship between intentional behavior and intentional worlds. Vygotsky's assertion, moreover, that the analysis of psychological processes was opposed to other psychologists' analysis of objects bears some affinity with cultural psychology's preoccupation with mutually interacting intentionalities, though the more Romantic of cultural psychologists hopes that that interaction will lead to a kind of self-transformation that Vygotsky never imagined. (Shweder, 1990) Under process analysis,

psychological research became for Vygotsky a reconstruction of the stages in the development of process, namely, the development from lower to higher psychological processes. Here the critique of one cultural psychologist would assign the distinction between higher and lower functions, or better, higher and lower levels, to the "Platonic" perspective of mainstream psychology. (Shweder, 1990) Vygotsky's historical approach to psychological processes as constantly changing comes close to one variant of cultural psychology's notion of culture as "inherited conceptions, evaluations, judgments, and goals, about which the intending think" and "out of which the intending build their lives," (Shweder, 1990), but that approach must be seen in its specifically Marxian context to appreciate its distance from cultural psychology.

As instances of personal change based on a conception of people as laboring animals who employ tools as mediating devices to work on nature, Vygotsky's developmental notion of psychological processes accords in some respects with cultural psychology (Cole, 1995) but not in others. There is, for example, the view that a socio-historical approach to the understanding of persons and their meaning making has through the work of anthropologists been increasingly narrowed to fewer and fewer exotic locals. The alternative, it has been said, is to understand other cultures in terms of a conception of self that is relational rather than individualistic. That postmodern conception of self as intersecting trajectories, though rooted in culture, avoids universal ideas of morality and social justice, even at the expense of accepting a moderate moral relativism. The conflict among values is seen here as resolved through multiple adjudication among selves so conceived, so that the present-day aversion to Enlightenment-based theories of history like Marxism is respected. (Gergen, 1990)

Vygotsky's answer to this criticism from cultural psychology might well be contained in his remark that history broadly conceived is not about past events but about the process of change. (Vygotsky, 1978)

Two final components of Vygotsky's method require that psychological findings be explanatory rather than descriptive, and that psychological analysis deals with what he called "real, causal, or dynamic" relations rather than a process's outer features. The first of these methodological requirements, though consistent with cultural psychology's rejection of mere description, sets as its goal what cultural psychology would regard as an over ambitious strategy of analysis. With its looser, more fluid notion of explanation, cultural psychology places less emphasis than did Vygotsky on rigorous analysis. As for his search for "real, causal, or dynamic" relations in a psychological process, Vygotsky relied from the point of view of cultural psychology on an essentialist understanding of a process's characteristics that is no longer tenable. His oft-repeated remark that psychology should look for "essences" rather than appearances would be acceptable to cultural psychologists inasmuch as it sought to penetrate beyond the phenomenal world but unacceptable insofar as it assumed that psychological processes had an inner nature that could be known to subjects and researchers.

One last area in which Vygotsky and some variants of cultural psychology are in more of an agreement lies in their common appeal to the idea of mediated understanding through tools, artifacts, and ultimately linguistic signs. (Cole, 1995; Wertsch, 1985, 2000) Though Vygotsky derived this feature of his developmental psychology from Marx's theory, the idea has remained important even to those cultural psychologists who reject Marxism as an Enlightenment-based doctrine. It is here that some cultural psychologists

have found the greatest contribution of Vygotsky to the contemporary discipline. The reliance on tools in some sense is also important to some conceptions of student learning in cultural psychology (Cole, 1995) and to at least one application of cultural psychology to the learning of history. (Wertsch, 2001) The importance of mediation through tools, artifacts, or signs will therefore be a matter to return to. For now, it may be said that whether one finds in this survey of Vygotsky's method elements conducing to a sympathy with Vygotsky or cultural psychology, it should have brought out some of the main features of each. Cultural psychology, it should be added, involves a more eclectic set of assumptions about selves and the world than did Vygotsky's experimental and analytical method. It therefore demands less of the discipline of psychology by way of explanation and analysis than did Vygotsky and points the way to a discussion of a key methodological requirement sometimes associated with cultural psychology, the notion of ecological validity.

Ecological validity, sometimes conceived as "the extent to which behavior sampled in one setting can be taken as characteristic of an individual's cognitive processes in a range of other settings," (Cole, 1995) has as one corollary the artificiality of laboratory tasks. It therefore fits well with cultural psychology's rejection of the methods of mainstream psychology. (Shweder, 1990) According to at least one proponent of cultural psychology, Vygotsky and his successors in the Russian-historical school sometimes violated this methodological requirement in at least two ways. First, they ignored the conditions in different cultures by applying the standards of Western norms and values about mental development, as in their experiments with Central Asian peasants during the early years of Soviet collectivization. Second, they designed

experiments – and derived interpretations of the experiments' findings – that separated results obtained from controlled institutional settings from those existing in more fluid outside environments. An example of the latter might be Vygotsky's belief that the "scientific" concepts presented in school represented a different and higher order of thinking than children's "spontaneous" concepts. (Cole, 1995; Vygotsky, 1986) Together these two violations of the requirements of ecological validity amounted in the opinion of some cultural psychologists to a denial of the praxis-based cultural ideas on which the Russian-historical school was founded. A more detailed discussion of the notion of ecological validity therefore seems appropriate.

Ecological Validity

These critiques by contemporary cultural psychology of methodological approaches followed by Vygotsky and other schools of psychology and social science open the subject of ecological validity, an assumption indirectly underlying much of cultural psychology. Above all, ecological validity's attention to an individual's socio-cultural environment and everyday thinking closely mirrors cultural psychology's concern with the relationship between self, however conceived, and culture. First set forth in distinct forms about a decade after the death of Vygotsky in 1934 by Egon Brunswick and Kurt Lewin, the earliest conceptions of ecological validity differed from other notions of validity crucial to experimental social science up to the present day. Unlike the requirement of internal validity, for example, it was not explicitly concerned with the ruling out of extraneous factors not responsible for changes in an investigation's dependent variable. Rather, ecological validity in the versions of Brunswick and Lewin envisioned psychology either as observing a wide sampling of tasks in varying

environments (Brunswick); or as discovering how part of the physical or social world determined the "boundary zone" of a person's life space, i.e., the psychological environment from the person's point of view (Lewin). (Cole, 1995, pp. 222-223)

Brunswick's conception of ecological validity was strongly experimentally based, involving tests of visual perception, which were – and remain – one of the most sophisticated areas of mainstream psychological theory. In the opinion of some contemporary cultural psychologists, however, his experimental successes resulted from 1) the measurability of his findings; 2) research questions that focused his subjects' attention on exactly those features of an environment he considered relevant to his hypothesis; and 3) reliance on competing hypotheses from the laboratory that enabled him to specify the meaning of correlations between two components of the subject's response, in his case between retinal and object sizes. (Cole, 1995) In other words, Brunswick's experiments according to this view did not amount to a genuinely "wide sampling of tasks in varying environments," and so did not fulfill the terms of his own notion of ecological validity. Despite his claim that his results could be generalized to normal life situations, cultural psychologists maintain that Brunswick had instead contrived a laboratory experiment in a nonlaboratory environment.

Lewin, on the other hand, challenged the methods of strictly laboratory experimentation directly. He argued that behavior (including presumably visual perception) at time *t* was a function of the situation at time *t* only. As such, it left open the possibility that environmental contexts other than the controlled behavior of the laboratory should be taken into account. For Lewin this meant above all that the subject's point of view, or life-space, be considered. A recent elaboration of the notions

of Brunswick and Lewin about ecological validity, moreover, has been said to have come from Urie Bronfenbrenner, whose conditions of ecologically valid research are three: 1) maintain the integrity of the real-life situations under investigation; 2) be faithful to the subjects' larger social and cultural contexts; and 3) ensure that the subjects perceive the experimental manipulations and outcomes as consistent with a research design's conceptual definitions. (Cole, 1995)

Yet another version of ecological validity has been derived from the ideas of F.C. Bartlett, who, nearly half a century ago, distinguished two kinds of systems of thinking. On one side of his distinction stand "closed systems" having a fixed goal, a fixed structure, and known elements where the task elements and allowable responses are known ahead of time. On the other side stand two kinds of "open systems". In one the goal is known but the set of appropriate responses as well as other constraints on reaching the goal are unspecified, and the people involved in experimental thinking act as explorers rather than as spectators. The other kind of open system involves everyday rather than experimental thinking and is characterized by people's attempts to fill in gaps in information. Neither closed-system nor experimental thinking, everyday thinking obeys constraints the processes of which are more difficult to specify. It is safe to say, I think, that a conception of ecological validity derived from Bartlett's typology of thinking, inasmuch as it relies on everyday thinking, represents the version of ecological validity furthest removed from the laboratory. In fact, the argument has been advanced that the mainstream psychologist's closed system "does not capture veridically the elements of the open system it is presumed to model," so that "experimental results systematically misrepresent the life process from which they are derived." (Cole, 1995,

pp. 248-249) Ecological validity in this view becomes a question of "the violence done to the phenomenon of interest [i.e., of the subject] owing to the analytical procedures employed." (Cole, 1995, p. 249) For standardized psychological tests, this means that ecological invalidity is built into the testing procedures themselves.

To one degree or another, the versions of ecological validity outlined above inevitably broach the difficult, if not irresolvable, debate about the different ontologies of the two main approaches to social science research today. A discussion of those ontologies is well outside the scope of this paper. Whether one's research stance inclines one to accept Lewin's views on the importance of the subject's life-space, or point of view; Bronfenbrenner's on the subject's role in judging experimental manipulations and outcomes; or Barlett's on the place of everyday thinking, or to reject all of them, little is to be gained in the understanding of accountability in current educational research by mounting a philosophical defense of one or another of the two ontological stances. It seems enough to say that Bronfenbrenner's and Bartlett's versions of ecological validity depart from the conditions of most experimental social science research today and surely would not fit any definition of the term "scientifically-based research" in the Elementary and Secondary Education Act of 2001 that would be acceptable to policy-makers. Little is to be gained, therefore, in the elucidation of "scientifically-based research" by explicating the term through some version of ecological validity. A more productive approach to determining the usefulness of ecological validity to educational research lies, I think, in its attempted application to student learning of a subject discipline. For the sake of convenience, I limit my examination of student learning to the place of ecological validity in three recent prescriptions for history learning: the cognitive, the disciplinary,

and the cultural psychological. As will become apparent, I employ a notion of ecological validity largely derived from Bartlett, though elements of Bronfenbrenner's conditions are not absent. That is, I take as ecological validity a requirement of learning that is faithful to students' larger social and cultural contexts and involves the everyday thinking of open systems rather than experimental thinking, whether of open or closed systems. This undertaking clearly demands an argument for the relevance of a methodological requirement formulated in the context of psychological experimentation and testing to student learning and to the learning of history in particular.

The Relevance of Ecological Validity to Student Learning

If we take ecological validity as requiring inclusion in psychological experiments and testing the socio-cultural environments of subjects and their processes of everyday thinking, a parallel argument may be made for a similar inclusion of socio-cultural and everyday factors in student learning. Perhaps the most important way in which ecological validity applies to student learning is through the notion of mediation by way of tools. If one envisions an equilateral triangle on its base, the left corner of the base represents the student, the right corner of the base represents the object, endpoint, or goal of the activity, and the top point of the triangle represents the cultural artifacts teachers give the students to reach the goal. The artifacts, or resources, and the goals of a school and its classrooms vary, of course, with a school's culture itself and with the larger cultures of which the school is a part. Whether one agrees with Vygotsky that the intentions of students and teachers are shaped primarily by the students' psychological development, or whether one believes with some cultural psychologists that the intentions, perhaps relationally conceived, (Gergen, 1990) of students and teachers are all

important, the place of mediating artifacts or signs in student learning remains. It does seem to be the case, however, that educational tools as tests and educational tools as other kinds of resources conducing more to student expression, creativity, and pleasure occupy different positions with respect to ecological validity. While a larger socio-cultural environment lies behind both tests and less cognitively-structured classroom resources, such as activities and resources encouraging student initiative, the second kind of tools better fits the requirements of ecological validity as conceived here. It is not enough, that is, for educational tools to possess some place in a larger culture, whether progressive or test-driven. On Bartlett's formulation, for instance, ecological validity clearly favors tools from a culture encouraging creativity over tools like tests. Of course, considerations other than ecological validity may be relevant here, and those considerations, such as public policy, political climate, and schools' missions, may well be decisive. But from the standpoint of ecological validity alone, there is a clear preference for educational tools and resources that are part of progressive culture rather than test-driven culture.

Less clearly settled is the question whether the analogy between the instructional styles of parents and teachers, if not exact, is strong enough to bring literature on the forms of thinking of children at home and as students at school to bear on learning theory. The relative value of everyday vs. more restricted academic thinking would not be judged at this point. It would be enough to establish some degree of congruence between the type of thinking required by teachers and parents, if only one type of thinking emerges from the literature and from life, to establish that ecological validity

had a relatively equivalent application to both. A beginning lies in the literature on everyday thinking.

It may help to return momentarily to the views of Vygotsky's successors. The main focus of the Vygotskian school between 1950 and 1980 has been described as the relation of agents in a theory of activity to "socio-culturally evolved means of mediation and modes of activity." (Wertsch, Minick & Arns, 1984, p. 152) Succesors of Vygotsky like Leontiv, however, refocused the Soviet school's analytical unit away from Vygotsky's primary concern with human consciousness and the higher mental functions of voluntary memory and attention, perception, and thinking to three distinct units of analysis: unit of activity, unit of goal-directed action, and unit of operation. The first unit dealt with an identifiable activity, whether formal schooling or household economic action, that may well have encompassed either academic or everyday thinking. The unit of goal-directed action, such as arranging objects in accordance with an experimentally-supplied model, more clearly represented a closed analytical system in Barlett's sense that had little relevance to everyday thinking. Differences in the way teachers and mothers supplied regulation to children differed mainly at the third level of analysis, the unit of operation, especially when considered from the standpoint of how teacher-student and mother-child dyads divided up responsibility for carrying out actions. Mothers were found to intervene to regulate children's actions much more frequently than teachers. The difference was attributed to the fact that in school, students were encouraged to participate in goal-directed activities even if they were not yet able to carry them out efficiently, or even correctly. In household economic activity, on the other hand, as in

apprenticeship, the rationale of learning was relatively efficient, error-free production of goods and services. (Wertsch, Minick & Arns, 1984)

With the spread of standardized tests in school environments, including NAEP, which set distinct goals to be met by teachers and students, this difference may well have less force than it once did, so that mothers and teachers of young children play similar roles in setting the goals of structured activities requiring an efficient set of cognitive responses. However, it seems to be equally true that different types of thinking, whether cognitively-structured or everyday, are promoted by different teachers and parents depending on the goals and styles they pursue. At the same time, education may be conceived as an attempt to enable children to do a "whole task", i.e., one that involves an activity or higher level goals that motivate the task. Even without taking testing into account, then, it is possible that in the classroom as in the laboratory, the higher level goals may not always be under the students' or subjects' control.(Newman, Griffin & Cole, 1984) The result of these considerations is that it is extremely difficult to say – on the basis of an analysis of the activities of parents and teachers alone - whether school-based or household activities today rely on everyday thinking as much as on the structured, cognitive thinking of closed analytical systems. Ecological validity's requirement that everyday thinking be opposed to academic thinking or cognitive efficiency is thus less relevant to both spheres of action.

As for the requirement that socio-cultural environments be taken into account, there is a diminishing number of school-based areas where games and real-world situations are present in the classroom, once again making academic environments closer to laboratory ones. One type of schooling in which one can still find attention to real-

world, as distinct from socio-cultural environments is that of alternative schools. (Darling-Hammond, Ancess & Ort, 2002) Even as the administration of promotion and exit exams proliferates, this feature of alternative schools may be persisting in the form of curricula relevant to student needs and interests and to community internships. On the other hand, the return of textbooks to alternative schools as tools of test preparation is certainly diminishing the importance of student concerns and real-world, i.e., socio-cultural, factors. Like everyday as distinct from closed, analytical thinking, socio-cultural as distinct from artificial environments contribute less to some schools' missions than they once did. Again, therefore, the requirement of ecological validity seems relevant as one factor in evaluating the kinds of environments existing in present-day schools. While it may well not decisively settle any issues of what kinds of thinking are as a rule promoted by parents as opposed to teachers, or which goals – progressive or test-driven – are more valuable, ecological validity at least points in the direction of real-world, socio-cultural considerations as desirable elements in the classroom. With that very tentative conclusion about the role of ecological validity in student learning in mind, three prescriptions for history learning that appeal to greater or lesser degrees to the ideas of cultural psychology may be presented.

Recent Prescriptions for the Learning of History

One recent proposal for the learning of history relies on what might loosely be called "cognitive" thinking. This proposal regards cognition, not as the highly structured form of thinking characteristic of closed analytical systems or the laboratory. Instead, it views cognition more broadly, as involving a process of inner dialogue. The process is exemplified under this proposal by the situation in which students try to make sense of

historical documents by thinking aloud about the sources and meanings behind the documents. By sounding out their thoughts about historical documents, this proposal claims, students, like professional historians, "pretend to deliberate with others while talking to themselves." (Wineburg, 2001, p. 70) This proposal, in emphasizing the importance of the reading of documents, whether written or pictorial, maintains a disciplinary connection to cognition, one in which the tools of professional historians are employed in the classroom. It may also take into account the role of historians, and given its disciplinary thrust, that of students as well, in creating narratives through consideration of multiple interpretations of different historical documents. (Holt, 1990; Wineburg, 2001) So there is a complex notion of understanding at work within this proposal, one that appeals to the student's inner dialogue as well as to disciplinary conceptions of historical artifacts and interpretation.

A second recent proposal for the learning of history values disciplinary thinking, also, holding that historical texts are the products of a cognitive process of investigation, selection, evaluation, interpretation, and thought. The cognitive process referred to here may be characterized as being narrower in conception than that in the first proposal. It refers to this cognitive process as a set of skills. It also views, like the first proposal, the learning of history as an epistemological process. Unlike the first proposal, this approach to the learning of history takes into account the contexts from which students come to the study of history and refuses to see the minds of history students as blank slates. It also places more emphasis than does the first proposal on what it terms the "externalization of thought" through journal writing in which students capture their own thinking. Rather than relying on a process of talking aloud while reading a document, this proposal aims at

having students put their own thoughts down in writing. To an extent, it shares the first proposal's reliance on narratival writing, but the narratives are produced by students regularly in class logs rather than as final products of documentary interpretation.

Another mediating principle of this proposal follows Vygotsky's rule of cognitive development, according to which any function in a child's cultural development toward higher functions appears first as an interpsychological category and then as an intrapsychological category. (Wertsch, 1985) Students are as a consequence offered social assistance until internalization occurs. By embedding historians' thinking into classroom artifacts – "textbooks, lectures, movies, maps, and facts" – and interactions, a class of historical novices is transformed into a community with disciplinary expertise. (Bain, 2001, p. 240)

One of the goals of the classroom activities pursued in this form of history learning is for students to acquire a sense of historical significance – what historians regard as important acts and events in the past - through such artifacts as student posters. In this way it fulfills all three points of cultural psychology's mediating triangle. And last, this proposal seeks to embed disciplinary thinking acquired through documentary analysis and interpretation into classroom interaction, thereby resembling in one of its goals Vygotsky's constructivist theory of learning. Where Vygotsky and his constructivist successors were interested more in knowledge creation, however, this approach assumes as valuable a set of skills and methods associated with professional historians. It may therefore be said to be more structured than Vygotsky's theory, as having a goal external to the classroom set by the historical discipline, notwithstanding Vygotsky's casually mentioned distinction between the academic concepts of schools and

the everyday concepts of non-educational environments. (Bain, 2001; Vygotsky, 1986) Despite this qualification, the second proposal more than the first appeals to several ideas associated with cultural psychology, including the working into history class of students' accounts of everyday events like baseball games. With its inclusion into the classroom of the criterion of embedded classroom interaction, moreover, it makes of history learning a potentially less isolated activity than the inner dialogue around documents characteristic of the first proposal.

A third recent proposal seeks to avoid what it calls the essentialism of the methods of psychological individualism by invoking ideas taken from cultural psychology. Perhaps this proposal involves the clearest contrast between the methods of mainstream psychology and cultural psychology. Again regarding historical texts as tools or artifacts, it considers them to be cultural tools rather than disciplinary ones. This places the texts in a point on the mediating triangle that does not take disciplinary understanding as the goal of the activity. But it makes the further point that even a firm acquaintance with documents as cultural tools does not mean that they have been learned as history. Drawing on the distinction between cognitive mastery, especially as called for by tests, and appropriation, this proposal insists on the appropriation of cultural tools in the form of narratives. Appropriation as used by this proposal, furthermore, involves feeling as well as cognition and means "accepting, endorsing, and experiencing values and behaviors as one's own." (Wertsch, 2001, p. 43) Noting that there is not an exact overlap between this conception of appropriation and the concern with mediation by cultural tools, this proposal nonetheless sees a parallel between the two views. It lies in the view of appropriation as consumption, in which children learning history are seen as

actively assimilating new values and behaviors. This process is different from the mere acceptance of culturally transmitted views characteristic of production of values in that it associates students' active assimilation of historical values and behaviors with the mediation of the study of history by primary documents, which are seen as cultural tools relied on by learners in appropriating, or making their own, the materials of history. Noting also that there is "an irreducible tension" between students as active agents and the cultural tools (i.e., narrative texts) they employ to carry out mediated action, this proposal departs from the ideas of cultural psychology in its belief that there is a modest parting of ways between the student intentionality of history learners and the cultural artifacts they make use of. (Wertsch, 2001, p. 40) Also, the third approach supplements ideas of cultural psychology like tool mediation and narrative with the notions of appropriation and consumption. It is perhaps the most theoretically complex of the three proposals.

Ecological Validity and the Three Proposals for Learning History

It should be fairly obvious from the discussion in the preceding section that the broadly cognitive view of history learning is the least ecological valid, while the socio-cultural proposal is the most ecological valid. This observation, implicit in the remarks above, should be spelled out more clearly. The first, broadly cognitive proposal with its real-aloud requirement includes, as has been mentioned, cultural psychology's emphasis on narrative construction (Bruner, 1990, 1996) with a view of documents that may be considered tool-like. But it does not refer to those documents as mediating tools, and it does not explicitly describe the read-aloud approach to documentary interpretation as a social classroom activity. If anything, it is an activity of individuals carried on in

isolation, and so it fails to meet one of central features of cultural psychology. More to the present point, it fails to apply the notion of everyday thinking to history learning, seeing documentary interpretation as a strictly disciplinary activity engaged in by professional historians. As for the impact of socio-cultural factors on student learning, it largely fails to mention them at all, taking documentary interpretation as a disciplinary one removed from real-world considerations. So the first proposal may be said to fail to meet the requirements of ecological validity. As an indirect consequence of this fact, it denies the factor of student intentionality in history learning, an intentionality that mirrors the values, aims, and forms of activity of the progressive classroom.

The second proposal more closely approaches the demands of ecological validity. To the degree that it values disciplinary thinking as a goal to be achieved, and insofar as it adopts a narrower conception of cognition, however, it departs from those demands. But in its emphasis on the place of student thinking about everyday events like baseball games and its relevance to history learning, it does approach ecologically valid considerations to a point. In this way it also makes use of the real-world matters that have been associated with the socio-cultural dimension of ecological validity. And because it employs the practice of externalized, social classroom activity as embedded in student discussions about history, the second proposal may be supposed to appeal indirectly to students' real-world as distinct from academic concerns, since real-world concerns are likely to emerge in the course of class discussions about history. The second proposal for learning history, then, much more nearly than the first meets the requirements of ecological validity. As a result of its emphasis on academic, disciplinary thinking as a goal of the activities involved in history learning, however, as well as in its

description of cognition as a set of skills to be mastered by students, it fails to meet those requirements. So the verdict of ecological validity on the second proposal remains somewhat mixed.

The third proposal, as has been indicated, amounts to a version of history learning that best approaches the ecologically valid ideas of everyday thinking and socio-cultural, real-world counterpoints to academic environments. Starting from vernacular as opposed to disciplinary history, it conceives of the form of thinking appropriate to history learning as arising from a set of preconceptions common to students rather than to professional historians. It would therefore be sharply criticized by those favoring a more discipline-based approach to history study in the schools, unless the preconceptions of students were somehow joined to ideas and interpretations of the discipline. (Seixas, 1993b, 1996.) Viewing historical documents as cultural artifacts mediating understanding, this proposal accounts for socio-cultural factors in a way connected with the real-world in its cultural sense, embodying social practices like those identified with religion, politics, community and other forms of a people's meaning-making. (Bruner, 1996; Geertz, 1973) (It does not do so, however, in a way that would be accepted by some cultural psychologists. [Gergen, 1990]) The third proposal incorporates socio-cultural factors also – and implicitly addresses one method of writing history compatible with the discipline as well, in emphasizing narratival writing by students. Narratival writing further addesses Bartlett's condition for the mediation by cultural tools that such tools promote subjects' – and in this case students' – creativity. Seeing students as active agents caught in a tension with their use of the cultural artifacts of history, it modifies the mediating triangle of cultural psychology. It nonetheless endorses student intentionality

in a way absent from the first two proposals. It does not stress the role of social activity in the classroom as the second proposal does, but it adheres to a notion of knowledge appropriation rather than cognitive mastery that the first two proposals ignore. From the standpoint of ecological validity and the broader field of cultural psychology, the third proposal best fits the criteria of learning presented in this paper. Ecological validity, of course, has not been said to be the only way to judge history learning; it must be regarded as one of several ways of doing so.

Ecological Validity and Other Views of the Learning of History

So far, I have indicated one or two ways that ecological validity may be used to help evaluate styles of student learning in general. A corollary that was implied in that discussion was that students' intentions and understandings are up to a point determined by the goals of a classroom's values, aims, and activities within the larger cultures of the school and beyond. Those intentions and understandings, in turn, may be more or consistent with the requirements of ecological validity, depending on the extent to which curriculum, instruction, and assessment take everyday thinking and socio-cultural factors in account.

It is worth digressing somewhat at this point to consider the relevance to this undertaking of one prominent view of student learning in general and of the views of researchers and educators specifically concerned with history education. This will make it possible to situate the socio-cultural work on the learning of history within a wider selection of literature. At the most general level, one recent theory of student learning maintains that students should be "taught for understanding". (Darling-Hammond, 2001, p. 96) Under this view, students can successfully evaluate and defend ideas with careful

reasoning and evidence, independently inquire into a problem using a productive research strategy, produce a high-quality piece of work, and understand the standards that indicate good performance. (Darling-Hammond, 2001) Stated in this bare way, this view of learning may be thought to place more emphasis on product rather than process. Yet that would be mistaken. This view cites approvingly teachers who view students as active learners, and quotes a student's letter to the *New York Times* comparing American and European modes of high school education in a way that is unfavorable to the American. Comparing students in the same American university, this letter writer asserted that European students, taught to understand rather than memorize subjects, have a better understanding of those subjects. (Darling-Hammond, 2001) This view of learning, then, while it does not overtly occupy itself with the form of thinking or socio-cultural context of students demanded by ecological validity, at least moves away from the highly-structured form of cognitive mastery of facts encouraged by tests. It indicates that, even outside the realm of learning theory influenced directly by Vygotsky and cultural psychology, learning theory may share with the socio-cultural approach a concern with forms of understanding that are not based on cognitive mastery.

Work specifically on the learning of history other than that underlying the three proposals outlined above has a bearing on this paper's main theme as well. Some of that work has a socio-cultural dimension, some of it does not, and virtually none of it is concerned with the kinds of thinking distinguished by ecological validity. It is important within the current corpus of literature on history learning nonetheless, for it addresses issues in a way that have been thought to be conducive to historical understanding in the sense of "understanding" used by the general view of learning mentioned above.

Among the suggestions for improved history learning found in this literature are two that pit opposite interpretations of the value of what may be called "socio-cultural" considerations against each other. One suggestion takes as an example of a socio-cultural phenomenon the ideas about Native Americans that adolescents bring to class from movie-watching. (Seixas, 1993b; Wineburg, 2001) While it does respect student preconceptions drawn from movies up to a point, it seeks to correct those preconceptions according to ideas in the current academic consensus about Native Americans. In this way, it does not unequivocally regard movies as a mediating tool for learning history, nor does it privilege everyday over academic thinking. It does, however, attach some weight to what have been referred to as the "vernacular histories" students bring to school based on familial, ethnic, gender, and popular cultural experiences, and so it does some justice to socio-cultural factors. The other suggestion takes students' vernacular histories more seriously, especially where those histories reflect students' race. This suggestion places a premium on multicultural education in history and therefore fulfills ecological validity's requirement that everyday thinking and socio-cultural factors be taken into account in student learning. The issue among students of history education in this category seems to be the extent to which their various interpretations of history learning give a place to those vernacular histories, and the extent to which they regard such histories as obstacles to learning that should be overcome. (Barton & Levstik, 1998; Levstik, 2001; Seixas, 1993b, 1993c, 1997) Whatever their value as prescriptions for the learning of history, then – and their worth has been judged by many history educators to be substantial – these suggestions do not meet the requirements of ecological validity in the fullest way.

Implications for the Accountability of Educational Researchers

Judging the case solely on the basis of the cognitive mastery of historical facts evaluated by standardized tests, U.S. schoolchildren apparently don't learn history. Results of the most recent NAEP U.S. History test revealed to one commentator that nearly 60 percent of the 4th, 8th, and 12th grade test-takers failed to demonstrate even "basic knowledge and understanding of the subject," and less than 20 percent of the 4th and 8th graders performed at the "proficient" or "advanced" level. (Manzo, 2002) Nor, as has been pointed out, is this a new phenomenon. A report on the 1987 NAEP results claimed that students' test scores place them "at risk of being gravely handicapped by. . .ignorance upon entry into adulthood." The results of a 1976 *New York Times* test of American youth were published under the headline "*Times* Test Shows Knowledge of American History Limited". Reports on a 1942 *New York Times* history exam prompted the historian Allan Nevins to write that high school students are "all too ignorant of history." And as far back as 1917, two educators wrote in the *Journal of Educational Psychology* that "[s]urely a grade of 33 in 100 on the simplest and most obvious facts of American history is not a record in which any high school can take pride." (Wineburg, 2001, p. vii) These results have been deemed cause for such changes in the teaching of history as curricula that reflect a heavier emphasis on the facts of basic civics and as the insertion in history classes of disciplinary knowledge and ways of learning. Some of these appeals to disciplinary knowledge are more progressive than others. (Seixas, 1996) Test results have also raised questions for some about the competence of history teachers, frequently from the perspective of *their* mastery of content as well as students'. (Cohen, 2001; Ravitch, 2001) For both students and teachers in the views of these critics of

history education, therefore, the issue is framed as the mastery, as distinct from the appropriation, of historical material. Those critics almost universally place more emphasis on test-taking than on creative classroom activities. In this way, they portray history as a closed analytical system with fixed goals, a fixed structure, and known elements. Little, if any, importance is attached by them to children's intentions and values.

I have presented the outline of three proposals, more or less socio-cultural, that meet the requirements of ecological validity in varying degrees and adopt a different set of approaches to reform in the learning of history. Those proposals, of course, generally run counter to the test-taking mandates of the "No Child Left Behind" Educational Act of 2001. The fundamental components of ecological validity – everyday thinking and students' socio-cultural concerns of family, ethnicity, and popular culture – may not contribute much to success in passing NAEP or other tests. But they do offer an alternative to teachers, including history teachers, as well as to educational researchers, parents, and the community, as to how to hold students – and their teachers – accountable for learning. It may not be appropriate to all school cultures or contexts, and so it will not appeal to many administrators, but it surely is a distinct possibility for schools that wish to pursue alternative or progressive strategies of educating the young. For educational researchers in particular, ecological validity affords a way of looking at student learning that emphasizes ideas that students bring to class rather than highly structured systems of thought better suited to tests. Researchers taking ecological validity into account in judging student learning would have to pay more attention to student intentions and understanding. It also means that researchers would be less concerned, in employing

ecologically valid notions as a means of evaluating learning activities, methods and materials, with measurement than observation and informal analysis. This is not to summarily judge the value of test-taking as against forms of learning not based on closed analytical systems. Nor is it to suggest than research based on measurement is somehow inferior to less rigorous research methods. It is to assert that methods based on ecological validity have a legitimate place in some educational contexts and should be applied accordingly. That is, it calls for a methodological pluralism in the study of student learning. Under such a methodological pluralism, research would be evaluated according to standards appropriate to its method, and there would be better or worse studies based on ecological validity just as there are in the case of studies based on measurement. Educational researchers, therefore, would be held accountable for their work by the standards of their research approaches.

The ultimate usefulness of ecological validity as a methodological standard to evaluate proposals for the contemporary learning of history needs further exploration and study. Until such exploration and study is undertaken, ecological validity can not be definitely said to have been established as a methodological approach. But a beginning has been made here with reference to history learning, and if nothing else, a modest case has been made for ecological validity as a methodological consideration to be taken into account by researchers into the study of history by schoolchildren. It has also been suggested that the field of cultural psychology from which ecological validity is taken has a place in the research into history learning. Further work on the value of cultural psychology as a field of educational research would, for one thing, more clearly put together, out of the diverse and somewhat eclectic ideas associated with the field, a

common set of concepts, assumptions, and tenets – including student intentionality, social activity in learning, mediating tools and artifacts, and narrative. That task would be an ambitious one well beyond the scope of this paper.

References

Bain, Robert B. (2001). Into the breach: Using research and theory to shape history instruction. In P.N. Stearns, P. Seixas & S. Wineburg (Eds.). *Knowing, teaching, and learning history: National and international perspectives* (pp. 331-352). New York: New York University Press.

Barton, K.C. & Levstik, L.S. (1998). 'It Wasn't a Good Part of History': National Identity and Students' Explanations of Historical Significance. *Teachers College Record 99(3).* (pp. 478-513).

Bruner, J. (1996). *The culture of education.* Cambridge, MA: Harvard University Press.

Bruner, J. (1990). *Acts of meaning.* Cambridge, MA: Harvard University Press.

Cole, M. (1995). *Cultural psychology: A once and future discipline.* Cambridge, MA: Harvard University Press.

Epstein, T.L. (1997). Sociocultural Approaches to Young Peoples' Historical Understanding. *Social Education 61.* (pp. 28-31).

Geertz, C. (1973). *The interpretation of cultures.* New York: Basic Books.

Gergen, K.J. (1990). Social understanding and the inscription of self. In J.W. Stigler, R.A. Shweder & G. Herdt (Eds.). *Cultural Psychology: Essays on comparative human development.* (pp. 569-609). Cambridge: Cambridge University Press.

Holt, T. (1990). *Thinking historically: Narrative, imagination, and understanding.* New York: College Entrance Examination Board.

Lave, J. (1990). The culture of acquisition and the practice of understanding. In J.W. Stigler, R.A. Schweder & G. Herdt (Eds.). *Cultural psychology: Essays on Comparative human development.* (pp. 309-327). Cambridge: Cambridge University Press

Levstik, L.S. (2001). Articulating the silences: Teachers' and adolescents' concept-

tions of historical significance. In P.N. Stearns, P. Seixas & S. Wineburg (Eds.). *Knowing, teaching, and learning history: National and international perspectives.* (pp. 284- 305). New York: New York University Press.

Manzo, K.K. (2002). U.S. History Again Stumps Senior Class. *Education Week 21(36).* (p. 1).

Newman, D., Griffin, P. & Cole, M. (1984). Social constraints in laboratory and classroom tasks. In B. Rogoff & J. Lave (Eds.). *Everyday cognition: development in social context.* (pp. 172-193). Cambridge, MA: Harvard University Press.

Ravitch, D. (2001). The educational backgrounds of history teachers. In P.N. Stearn, P. Seixas & S. Wineburg (Eds.). *Knowing, teaching, and learning history: National and international perspectives.* (pp. 143-155). New York: New York University Press.

Rosenzweig, R. (2001). How Americans use and think about the past: Implications From a survey for the teaching of history. In P.N. Stern, P. Seixas & S. Wineburg (Eds.). *Knowing, teaching, and learning history: National and international perspectives.* (pp. 262-283). New York: New York University Press.

Seixas, P. (1997). Mapping the Terrain of Historical Significance. *Social Education 61* (pp. 220-228).

Seixas, P. (1996). Conceptualizating the growth of historical understanding. In D.R. Olson & N. Torrance (Eds.). *The handbook of education and human development.* (pp. 765-783). Oxford: Blackwell.

Seixas, P. (1994). Confronting the Moral Frames of Popular Film: Young People Respond to Historical Revisionism. *American Journal of Education 102* (pp. 261-285).

Seixas, P. (1993a). The Community of Inquiry as a Basis for Knowledge and Learning: The Case of History. *American Educational Research Journal 30(2)* (pp. 305-324).

Seixas, P. (1993b). Popular Film and Young People's Understanding of the History of Native American-White Relations. *The History Teacher 26(3).* (pp. 351-370).

Seixas, P. (1993c). Historical Understanding among Adolescents in a Multicultural Setting. *Curriculum Inquiry 23(3)* (pp. 301-327).

Shore, B. (1996). *Culture in Mind: Cognition, culture, and the problem of meaning.* New York and Oxford: Oxford University Press.

Shweder, R.A. (1990). Cultural psychology – what is it? In J.W. Stigler, R.A. Shweder

& G. Herdt (Eds.). *Cultural psychology: Essays in comparative human development.* (pp. 1-43). Cambridge: Cambridge University Press.

Vygotsky, L.S. (1978). *Mind in Society: The Development of Higher Psychological Processes.* Cambridge, MA: Harvard University Press.

Vygotsky, L.S. (1986). *Thought and language.* Cambridge, MA: MIT Press.

Wertsch, J.V. (2001). Is it possible to teach beliefs, as well as knowledge about the Past? In P.N. Stearn, P. Seixas & S. Wineburg (Eds.). *Knowing, teaching, and learning history: National and international perspectives.* New York: New York University Press.

Wertsch, J.V. (2000). Vygotsky's two minds on the nature of meaning. In C.D. Lee & P. Smagorinsky (Eds.). *Vygotskian perspectives on literacy research: Constructing meaning through collaborative inquiry.* Cambridge: Cambridge University Press.

Wertsch, J.V. (1994). Struggling with the past. In M. Carreto & J.F. Voss (Eds.). *Cognitive and instructional processes in history and the social sciences.* (pp. 323-338). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Wertsch, J.V., Tulviste & Hagstrom, F. (1993). A sociocultural approach to agency. In E.A. Forman, N. Minick & C.A. Stone (Eds.). *Contexts for learning: Sociocultural dynamics in children's development.* (pp. 336-356). New York and Oxford: Oxford University Press.

Wertsch, J.V. (1990). The voice of rationality in a sociocultural approach to mind. In L.C. Moll (Ed.). *Vygotsky and education: Instructional implications and applications of sociohistorical psychology.* (pp. 111-126). Cambridge: Cambridge University Press.

Wertsch, J.V. (1985). *Vygotsky and the social formation of mind.* Cambridge, MA: Harvard University Press.

Wertsch, J.V., Minick, N. & Arms, F.V. (1984). The creation of context in joint problem-solving. In B. Rogoff & J. Lave, (Eds.). *Everyday cognition: Development in social context.* (pp. 151-171). Cambridge, MA: Harvard University Press.

Wineburg, S. (2001). *Historical thinking and other unnatural acts: Charting the future of the past.* Philadelphia: Temple University Press.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

ERIC Educational Resources Information Center

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: CULTURAL PSYCHOLOGY AND THE LEARNING OF HISTORY: THE PROBLEM OF ECOLOGICAL VALIDITY	
Author(s): THOMAS COCKBILL	
Corporate Source: NEW YORK UNIVERSITY	Publication Date:

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

☐

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

☒

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature: Thomas W Cockbill	Printed Name/Position/Title: THOMAS COCKBILL / INSTRUCTOR
Organization/Address:	Telephone: 212-427-1232 FAX: 212-427-1732
	E-Mail Address: cockbill@attglobal.net Date: 6/4/03

(Over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

ERIC/CHESS
2805 E. Tenth Street, #120
Bloomington, IN 47408

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: ericfac@inet.ed.gov
WWW: http://ericfacility.org

EFF-088 (Rev. 2/2001)